

REMARKS

Claims 1-12 remain pending. Claims 1-6 are amended, and claims 7-12 are withdrawn from consideration. No claims are canceled or added.

The Abstract stands objected to for having more than 150 words. As shown above, the Abstract is now amended so that it does not have more than 150 words. Accordingly, withdrawal of the objection is now requested.

The disclosure stands objected to because the Brief Description of the Drawings does not refer to each figure using the exact notation of the drawings. As shown above, this section of the disclosure is now amended to overcome the objection. Accordingly, withdrawal of the objection is now requested.

Claim 1 stands objected to because the word “the” is not inserted before the word “same” in line 6 (as originally presented). As shown above, claim 1 is now amended to overcome the objection. Accordingly, withdrawal of the objection is now requested.

Claims 1-3, 5, and 6 stand rejected under 35 U.S.C. § 103(a) as obvious over *Rubin et al.* (U.S. Patent No. 4,733,246). Applicants respectfully submit that the rejection should be withdrawn.

Independent claim 1, as amended, describes an ultra-lightweight electromagnetic wave concentrator such that:

a reinforcing groove structure is formed at least in the peripheral zone of said reflective surface to increase the rigidity of said thin-film curved body.

Claims 2, 3, 5, and 6 depend from claim 1, so they also describe an ultra-lightweight electromagnetic wave concentrator with this feature.

In contrast, the *Rubin et al.* electromagnetic wave concentrator does not have a reinforcing groove structure as described in the claims. Therefore, the rejection should be withdrawn for at least this reason.

Rubin et al. discloses instead a polyurethane material 31 (a thermoplastic) bonded to the back of the reflector material 10 to form a rigid support structure 30, and an ABS plastic support 18 is coated on the reflector material 10. (Note Fig. 3.) Therefore, the *Rubin et al.* electromagnetic wave concentrator suffers from the problem of increasing weight, as discussed in the background discussion of applicants' specification (page 3, middle paragraph). In applicants' invention, however, the reinforcing groove structure is molded in the reflective surface with thin-film material that is used for a thin-film curved body. This configuration causes the invention to become ultra-light and rigid. Accordingly, the invention overcomes the problem of the Prior Art.

Also, the *Rubin et al.* rigid support structure 30 is formed by reaction injection molding (RIM). (Column 2, lines 57-62.) Applicants' reinforcing groove structure, on the other hand, is molded by the effect of stress relaxation while simultaneously molding the thin-film curved body with thin-film materials. (See applicants' disclosure, page 12, bottom paragraph.)

Furthermore, the *Rubin et al.* adhesive 16 is used for metal layer 14 to bond with ABS plastic 18, but, in applicants' invention, the reinforcing agent is coated, entirely or partially, over the reinforcing groove structure over the back of the reflective surface to increase the rigidity of the thin-film curved body. This increased rigidity is in addition to the rigidity afforded by the reinforcing groove structure alone.

In conclusion, because the *Rubin et al.* electromagnetic wave concentrator does not have a “reinforcing groove structure” as described in the claims, applicants solicit the withdrawal of the obviousness rejection of claims 1-3, 5, and 6.

Claim 4 is rejected under 35 U.S.C. § 103(a) as obvious over *Rubin et al.* in view of *Withoos* (U.S. Patent No. 4,171,563). Applicants respectfully submit that the rejection should be withdrawn.

Claim 4, like claims 2, 3, 5, and 6, depends from claim 1, so claim 4 also now describes an ultra-lightweight electromagnetic wave concentrator that has a “reinforcing groove structure” formed at least in the peripheral zone of a reflective surface to increase the rigidity of a thin-film curved body. As discussed above, *Rubin et al.* does not teach or suggest this feature. *Withoos* also does not teach or suggest the claimed reinforcing groove structure.

Accordingly, applicants solicit the withdrawal of the obviousness rejection of claim 4.

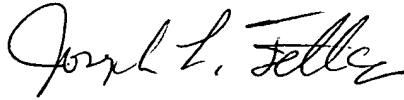
In view of the remarks above, applicants now submit that the application is in condition for allowance. Accordingly, a Notice of Allowability is hereby requested. If for any reason it is believed that this application is not now in condition for allowance, the Examiner is invited to contact applicants’ undersigned attorney at the telephone number indicated below to arrange for disposition of this case.

Amendment Under 37 C.F.R. § 1.111
Serial No. 10/635,641
Attorney Docket No. 030943

In the event that this paper is not timely filed, applicants petition for an appropriate extension of time. The fees for such an extension, or any other fees which may be due, may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, appearing to read "Joseph L. Felber". The signature is fluid and cursive, with the first name "Joseph" and last name "Felber" clearly distinguishable.

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